WO 2004/085470 PCT/GB2004/001338

1

SEQUENCE LISTING

| <110> | PHARMA PACIFIC PTY LTD | |
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| <120> | INTERFERON-ALPH A INDUCED GENE | |
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| <170> | PatentIn version 3.1 | |
| <210> <211> <212> <213> | 1 6045 DNA Homo sapiens | |
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| ga atg Met 1 | g gaa aga aat gtt ctt aca aca ttt tca c ag gaa atg tcc cag 28 : Glu Arg Asn Val Leu Thr Thr Phe Ser Gln Glu Met Ser Gln 5 10 15 | 7 |
| tta at Leu Il | tt ttg aat gaa at g cca aaa gct gaa tat tcc agt tta ttc aat le Leu Asn Glu Met Pro Lys Ala Glu Tyr Ser Ser Leu Phe Asn 20 25 30 | 5 |
| gat ti Asp Pl | tt gtt gaa tct gaa ttt ttt ttg att gat ggg gat tca tta ctt he Val Glu Ser Glu Phe Phe Leu Ile Asp Gly Asp Ser Leu Leu 35 40 45 | 3 |
| atc a Ile T | ca tgt atc tgt gag ata tca ttt aag cct ggg cag aac ctc cat 43 hr Cys Ile Cys Gl u Ile Ser Phe Lys Pro Gly Gln Asn Leu His 50 55 60 | 1 |
| ttc t Phe P 6 | he Tyr Leu Val Glu Arg Tyr Leu Val Asp Leu Ile Ser Lys Gly | 79 |
| | aa ttc acc ata gt t ttc ttc aag gat gcc gag tat gcg tat ttc 52 In Phe Thr Ile Val Phe Phe Lys Asp Ala Glu Tyr Ala Tyr Phe 85 90 95 | 27 |

| | | | | | | | Arg | | | tta Leu | Leu | | | 575 |
|-----|-----|-------|-----|------|-------|-----|-------|-------|-----|-------------------|-------|-------|----------------|------|
| | | | | | | | | | | ttt Phe | | | | 623 |
| | | | | | | | | | | tac Tyr | | | | 671 |
| | | | | | | | | | | aca Thr 155 | | | | 719 |
| | | | | | Trp | - | | | | aac Asn | | | | 767 |
| | | | | | | | | | | gca Ala | | | | 815 |
| | | | His | | | | | | | aat Asn | | | | 863 |
| | | Tyr | | | | | Asn | | | gaa G1u | | | | 911 |
| | Leu | | | | | Gly | | | | tgg Trp 235 | | | | 959 |
| Glu | | | | | ^ Val | | | | | caa G1n | | | | 1007 |
| | | | | , Ar | | | | | Thr | tca Ser | | | ı Ser | 1055 |
| | | | His | | | | | / Asr | | | | · Sei | ggt Gly | 1103 |
| | | r Glu | | | | | l Asr | | | | ı Thr | | g cag u Gln | 1151 |

| Glu | _ | _ | _ | _ | tg t Cy s | | _ | | _ | | | | - | | 1199 |
|-----|-----|-----|-----|---|----------------------|-----|-----|-----|---|-----|-----|-----|-----|-----|------|
| | | _ | | | tct Ser 325 | | | - | - | - | - | | | | 1247 |
| | | | | | at g Me t | | | | | | | | | | 1295 |
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| | _ | | | | ga a G1 u | | _ | | - | | | | | | 1439 |
| | | | | | at g Me t 40 5 | | | | | | | | | | 1487 |
| | - | _ | - | _ | ga c As p | | | | | | | | | Arg | 1535 |
| | | | • | _ | tt t Ph e | | | _ | | | | | | - | 1583 |
| | | | Glu | | gt g Va 1 | | | Leu | | | | | Thr | | 1631 |
| | | ۷a٦ | _ | | tt t Phe | - | Gly | _ | | _ | | Asp | _ | | 1679 |
| | Lys | | | | cc t Pr c 48 5 | IJ€ | | | | | Val | | | | 1727 |
| | _ | _ | | | | | | | | Lys | | - | - | Asp | 1775 |

| g tcc agg tgt g Ser Arg Cys 515 | | Glu Lys S | | | 1823 |
|---|---------------|-----------|---|---|------|
| n tct gtg caa g Ser Val Glr) | | | | | 1871 |
| n gaa aca gto u Glu Thr Val | - | Ile Ile Ì | | | 1919 |
| g aag gat tt t s Lys Asp Phe 56 S | Ser Gly Pro | | | | 1967 |
| gaa ata at t Glu Ile Ile 580 | | _ | | _ | 2015 |
| a caa aag gaa u G1n Lys G1 u 595 | | Trp Asn | - | | 2063 |
| g caa ttg aa a u Gln Leu Ly:) | - | | | | 2111 |
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| a gaa ggt aa a u Glu Gly Ly: 660 | _ | - | | - | 2255 |
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| | | | | _ | aa a Ly s 72 5 | | | | | | | | | | | 2447 |
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| | | | | | tc a Se r | | | | | | | | | | | 2639 |
| | | | | | ga g G1 u 80 5 | | | | | | | | | | | 2687 |
| | | | | | gt t Va 1 | | | | | | | | | | | 2735 |
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| | | | | | tat Tyr 885 | | | | | | | | | | | 2927 |
| | | | | | ga a G1 u | | | | | | | | | | | 2975 |
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| acc gag tgg cta caa tcg gta aaa tgg tac tgg aaa caa gaa gac aaa Thr Glu Trp Leu Gln Ser Val Lys Trp Tyr Trp Lys Gln Glu Asp Lys 930 935 940 | 3071 |
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| ctt gtg ctc tat gga ga g agg tat aat gat cta gag aag cat gta tgt Leu Val Leu Tyr Gly Gl u Arg Tyr Asn Asp Leu Glu Lys His Val Cys 980 985 990 | 3215 |
| tca ata aaa cat ggt ga c att cat ttt gat cat ttt cac cca tgt gct Ser Ile Lys His Gly As p Ile His Phe Asp His Phe His Pro Cys Ala 995 1000 1005 | 3263 |
| gca cta aca aca gat c at att gaa agg tat gg a ttc cct cct gat Ala Leu Thr Thr Asp H is Ile Glu Arg Tyr Gl y Phe Pro Pro Asp 1010 1015 1020 | 3308 |
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| ttt caa att tgg aaa a gt tgg cct cgg gcc ca g gaa ctg tgc cca Phe Gln Ile Trp Lys S er Trp Pro Arg Ala Gln Glu Leu Cys Pro 1040 1045 1050 | 3398 |
| gaa aac ttc att cat ttt aac aat aaa tta gtc att aaa aag atg Glu Asn Phe Ile His Phe Asn Asn Lys Leu Val Ile Lys Lys Met 1055 1060 1065 | 3443 |
| gat gct agg aaa tat gaa gag agt cta aag gca gaa tta aca agt Asp Ala Arg Lys Tyr Glu Glu Ser Leu Lys Ala Glu Leu Thr Ser 1070 1080 | 3488 |
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| aat ctt agt cct gaa g ca gat ttg agt cca ga a aac atg atc acc Asn Leu Ser Pro Glu A la Asp Leu Ser Pro Glu Asn Met Ile Thr 1100 1105 1110 | 3578 |
| atg ttt cca ctt cta gtt gaa aaa cta agg aa a atg gag aag tta Met Phe Pro Leu Leu V al Glu Lys Leu Arg Lys Met Glu Lys Leu 1115 1120 1125 | 3623 |

| cct Pro | gca A1a | cta Leu 1130 | ttt Phe | ttt Phe | t ta L eu | ttc Phe | aag Lys 1135 | tta Leu | gga Gly | gct Ala | gta Val | gaa Glu 1140 | aac Asn | | 3668 |
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| agg Arg | cct Pro | ccc Pro 1160 | aaa Lys | gct Ala | g at A sp | aaa Lys | gaa G1u 1165 | gcc Ala | cat His | gt c Va 1 | atg Met | gct Ala 1170 | aac Asn | | 3758 |
| ctt Leu | cga Arg | aaa Lys 1175 | gtt Val | aaa Lys | a aa L ys | tcc Ser | ata Ile 1180 | gag Glu | aaa Lys | ca a G1 n | aag Lys | atc Ile 1185 | ata Ile | - | 3803 |
| | | agc Ser 1190 | | | | | | | | | | agc Ser 1200 | | | 3848 |
| | | gct Ala 1205 | | | | | | | | | | gag Glu 1215 | | | 3893 |
| | | atc Ile 1220 | | | | | | | | | | aaa Lys 1230 | | | 3938 |
| | | gag Glu 1235 | | | | | | | | | | aaa Lys 1245 | | • | 3983 |
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| tat Tyr | cat His | cac His 1265 | agt Ser | gct Ala | a tg M et | agt Ser | ttc Phe 1270 | aaa Lys | gaa Glu | aa a Ly s | caa G1n | tta Leu 1275 | gtt Val | gaa G1u | 4073 |
| | | ttt Phe 1280 | | | | | | | | | | gct Ala 1290 | | | 4118 |
| | | gct Ala 1295 | | | | | | | | | | gtg Val 1305 | | | 4163 |
| gct Ala | caa G1n | aac Asn 1310 | tca Ser | gtc Val | t at Tyr | ctg Leu | gat Asp 1315 | gcg Ala | ttg Leu | aa t As n | tat Tyr | aga Arg 1320 | cag Gln | atg Met | 4208 |

| tct Ser | ggc Gly | cgt Arg 1325 | gct Ala | gga Gly | a ga A rg | aga Arg | ggt Gly 1330 | caa Gln | gac Asp | ct g Le u | atg Met | gga Gly 1335 | gat Asp | gta Val | 4253 |
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| ctg Leu | gtc Val | ctg Leu 1370 | cga Arg | ctc Leu | a tg M et | ctg Leu | ctg Leu 1375 | gct Ala | tcc Ser | aa g Ly s | gga G1y | gat Asp 1380 | gac Asp | cca Pro | 4388 |
| | | | | | | | | | | | | cat His 1395 | | _ | 4433 |
| ctg Leu | tcc Ser | ttc Phe 1400 | aag Lys | caa G1n | c cc P ro | aga Arg | gtc Val 1405 | atg Met | gac Asp | at g Me t | tta Leu | aaa Lys 1410 | ctt Leu | tac Tyr | 4478 |
| ttc Phe | ctg Leu | ttt Phe 1415 | tct Ser | ttg Leu | c ag G In | ttc Phe | ctg Leu 1420 | gtg Val | aaa Lys | ga g G1 u | ggc Gly | tat Tyr 1425 | tta Leu | gat Asp | 4523 |
| | | ggt Gly 1430 | | | | | | | | | | tca Ser 1440 | | _ | 4568 |
| | | cat His 1445 | | | | | | | | | | ttt Phe 1455 | ctt Leu | - | 4613 |
| | | ctc Leu 1460 | | | | | | | | | | aaa Lys 1470 | | | 4658 |
| | | | | | | | | | | | | tta Leu 1485 | | | 4703 |
| gca Ala | cat His | ctc Leu 1490 | | | | | | | | | | ttc Phe 1500 | | | 4748 |
| _ | | ttc Phe 1505 | gag Glu | ttt Phe | t at Tyr | caạ G1n | tca Ser 1510 | aag Lys | gtg Val | tt c Ph e | ctt Leu | gat Asp 1515 | gat Asp | ctc Leu | 4793 |

| cct Pro | gag G1u | gat Asp 1520 | ttt Phe | agt Ser | g at A sp | gct Ala | tta Leu 1525 | gat Asp | gaa Glu | tat Tyr | aac Asn | atg Met 1530 | aaa Lys | att Ile | 4838 |
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| atg Met | gag Glu | gac Asp 1535 | ttt Phe | acc Thr | a ct Thr | ttc Phe | cta Leu 1540 | cga Arg | att Ile | gt t Va 1 | tcc Ser | aaa Lys 1545 | ctg Leu | gct Ala | 4883 |
| | | aat Asn 1550 | | | | | | | | | | | | | 4928 |
| aca Thr | ggt Gly | aaa Lys 1565 | gaa Glu | tgt Cys | g aa G 1u | gac Asp | tct Ser 1570 | caa G1n | ctc Leu | gt a Va 1 | tct Ser | cat His 1575 | ttg Leu | atg Met | 4973 |
| | | aag Lys 1580 | | | | | | | | | | | | - | 5018 |
| | | aac Asn 1595 | | | | | | | | | | | | | 5063 |
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| gtg Val | ctg Leu | ttg Leu 1625 | tca Ser | cag G1n | a aa L ys | ttt Phe | gat Asp 1630 | aac Asn | cga Arg | gg a G1 y | agg Arg | aaa Lys 1635 | atg Met | tcg Ser | 5153 |
| ctt Leu | aat Asn | gcc Ala 1640 | tat Tyr | gca Ala | c tg L eu | gat Asp | ttc Phe 1645 | tac Tyr | aaa Lys | cat His | ggt Gly | tcc Ser 1650 | ttg Leu | | 5198 |
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| ttg Leu | ttg Leu | aag Lys 1670 | gat Asp | ttt Phe | gca Ala | ctc Leu | acc Thr 1675 | att Ile | aaa Lys | tct Ser | atc Ile | agt Ser 1680 | gtt Val | tcc Ser | 5288 |
| ttg Leu | cgt Arg | gag Glu 1685 | cta Leu | tgt Cys | gaa Glu | aat Asn | gaa Glu 1690 | gac Asp | gac Asp | aa c As n | gtt Val | gtc Val 1695 | tta Leu | gcc Ala | 5333 |
| ttt Phe | gaa G1u | caa Gln 1700 | ctg Leu | agt Ser | a ca T hr | act Thr | ttt Phe 1705 | tgg Trp | gaa Glu | aa g Ly s | tta Leu | aac Asn 1710 | aaa Lys | gtc Val | 5378 |

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| Phe Val Glu Ser Glu Ph e Phe Leu Ile Asp Gly Asp Ser Leu Leu Ile 35 40 45 | | | | | | | | | | | | | |
| Thr Cys Ile Cys Glu Ile Ser Phe Lys Pro Gly Gln Asn Leu His Phe 50 55 60 | | | | | | | | | | | | | |
| Phe Tyr Leu Val Glu Arg Tyr Leu Val Asp Leu Ile Ser Lys Gly Gly 65 75 80 | | | | | | | | | | | | | |
| Gln Phe Thr Ile Val Phe Phe Lys Asp Ala Glu Tyr Ala Tyr Phe Asn 85 90 95 | | | | | | | | | | | | | |
| Phe Pro Glu Leu Leu Ser Leu Arg Thr Ala Leu Ile Leu His Leu Gln 100 105 110 | | | | | | | | | | | | | |
| Lys Asn Thr Thr Ile Asp Val Arg Thr Thr Phe Ser Arg Cys Leu Ser 115 120 125 | | | | | | | | | | | | | |
| Lys Glu Trp Gly Ser Ph e Leu Glu Glu Ser Tyr Pro Tyr Phe Leu Ile' 130 135 140 | | | | | | | | | | | | | |
| Val Ala Asp Glu Gly Le u Asn Asp Leu Gln Thr Gln Leu Phe Asn Phe 145 150 155 160 | | | | | | | | | | | | | |

| Leu | Пе | Пe | His | Ser 165 | Trp | Ala | Arg | Lys | Va1 170 | Asn | Va1 | Val | Leu | Ser 175 | Ser |
|-------------|------------|------------|------------|------------|--------------|------------|--------------------|------------|------------|--------------------|------------|------------|------------|------------|------------|
| G1y | Gln | Glu | Ser 180 | Asp | Va 1 | Leu | Cys | Leu 185 | Tyr | Ala | Tyr | Leu | Leu 190 | Pro | Ser |
| Met | Tyr | Arg 195 | His | G1n | Il e | Phe | Ser 200 | Trp | Lys | Asn | Lys | G1n 205 | Asn | Ile | Lys |
| Asp | Ala 210 | Tyr | Thr | Thr | Le u | Leu 215 | Asn | G1n | Leu | G1u | Arg 220 | Phe | Lys | Leu | Ser |
| A1a 225 | Leu | Ala | Pro | Leu | Ph e 23 0 | G1y | Ser | Leu | Lys | Trp 235 | Asn | Asn | Пe | Thr | G1u 240 |
| Glu | Ala | His | Lys | Thr 245 | Va 1 | Ser | Leu | Leu | Thr 250 | G1n | Val | Trp | Pro | G1u 255 | G1y |
| Ser | Asp | Ile | Arg 260 | Arg | Va 1 | Phe | Cys | Va1 265 | Thr | Ser | Cys | Ser | Leu 270 | Ser | Leu |
| Arg | Met | Tyr 275 | His | Arg | Ph e | Leu | G1 <i>y</i> 280 | Asn | Arg | G1u | Pro | Ser 285 | Ser | G1y | Gln |
| G1u | Thr 290 | G1u | Ile | GIn | G1 n | Va1 295 | Asn | Ser | Asn | Cys | Leu 300 | Thr | Leu | G1n | Glu |
| Met 305 | G1u | Asp | Leu | Cys | Ly s 31 0 | Leu | His | Cys | Leu | Thr 315 | Val | Val | Phe | Leu | Leu 320 |
| His | Leu | Pro | Leu | Ser 325 | G1 n | Arg | Ala | Cys | A1a 330 | Arg | Va1 | Ile | Thr | Ser 335 | His |
| Trp | Ala | Glu | Asp 340 | Met | Ly s | Pro | Leu | Leu 345 | Gln | Met | Lys | Lys | Trp 350 | Cys | Glu |
| Tyr | Phe | I1e 355 | Leu | Arg | As n | Пe | His 360 | Thr | Phe | G1u | Phe | Trp 365 | Asn | Leu | Asn |
| Leu | Ile 370 | His | Leu | Ser | As p | Leu 375 | Asn | Asp | G1u | Leu | Leu 380 | Leu | Lys | Asn | Ile |
| A1 a 385 | Phe | Tyr | Tyr | Glu | As n 39 0 | Glu | Asn | Val | Lys | G1 <i>y</i> 395 | Leu | His | Leu | Asn | Leu 400 |
| Gly | Asp | Thr | Ile | Met 405 | Ly s | Asp | Tyr | G1u | Tyr 410 | Leu | Trp | Asn | Thr | Va7 415 | Ser |
| Lys | Leu | Va1 | Arg 420 | Asp | Ph e | Glu | Va1 | G1y 425 | G1n | Pro | Phe | Pro | Leu 430 | Arg | Thr |

Thr Lys Val Cys Phe Leu Gly Lys Lys Pro Ser Pro Ile Lys Asp Ser Ser Asn Glu Met Val Pro Asn Leu Gly Phe Ile Pro Thr Ser Ser Phe Val Val Asp Lys Phe Ala Gly Asp Ile Leu Lys Asp Leu Pro Phe Leu 47 0 Lys Ser Asp Asp Pro Ile Val Thr Ser Leu Val Lys Gln Lys Glu Phe Asp Glu Leu Val His Trp His Ser His Lys Pro Leu Ser Asp Asp Tyr Asp Arg Ser Arg Cys Gl n Phe Asp Glu Lys Ser Arg Asp Pro Arg Val Leu Arg Ser Val Gln Lys Tyr His Val Phe Gln Arg Phe Tyr Gly Asn Ser Leu Glu Thr Val Ser Ser Lys Ile Ile Val Thr Gln Thr Ile Lys 55 0 Ser Lys Lys Asp Phe Ser Gly Pro Lys Ser Lys Lys Ala His Glu Thr Lys Ala Glu Ile Ile Ala Arg Glu Asn Lys Lys Arg Leu Phe Ala Arg Glu Glu Gln Lys Glu Glu Gln Lys Trp Asn Ala Leu Ser Phe Ser Ile Glu Glu Gln Leu Lys Gl u Asn Leu His Ser Gly Ile Lys Ser Leu Glu Asp Phe Leu Lys Ser Cys Lys Ser Ser Cys Val Lys Leu Gln Val Glu 63 0 Met Val Gly Leu Thr Al a Cys Leu Lys Ala Trp Lys Glu His Cys Arg Ser Glu Glu Gly Lys Thr Thr Lys Asp Leu Ser Ile Ala Val Gln Val Met Lys Arg Ile His Ser Leu Met Glu Lys Tyr Ser Glu Leu Leu Gln Glu Asp Asp Arg Gln Le u Ile Ala Arg Cys Leu Lys Tyr Leu Gly Phe

| Asp 705 | G1u | Leu | Ala | Ser | Se r 71 0 | Leu | His | Pro | Ala | G1n 715 | Asp | Ala | Glu | Asn | Asp 720 |
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| ۷a۱ | Lys | Va1 | Lys | Lys 725 | Ar g | Asn | Lys | Tyr | Ser 730 | Ile | G1 y | Пе | Gly | Pro 735 | A1 a |

- Arg Phe Gln Leu Gln Tyr Met Gly His Tyr Leu Ile Arg Asp Glu Arg
 740 745 750
- Lys Asp Pro Asp Pro Arg Val Gln Asp Phe Ile Pro Asp Thr Trp Gln 755 760 765
- Arg Glu Leu Leu Asp Val Val Asp Lys Asn Glu Ser Ala Val Ile Val
 770 780
- Ala Pro Thr Ser Ser Gl y Lys Thr Tyr Ala Ser Tyr Tyr Cys Met Glu
 785 79 0 795 800
- Lys Val Leu Lys Glu Ser Asp Asp Gly Val Val Val Tyr Val Ala Pro 805 810 815
- Thr Lys Ala Leu Val As n Gln Val Ala Ala Thr Val Gln Asn Arg Phe 820 825 830
- Thr Lys Asn Leu Pro Ser Gly Glu Val Leu Cys Gly Val Phe Thr Arg 835 840 845
- Glu Tyr Arg His Asp Al a Leu Asn Cys Gln Val Leu Ile Thr Val Pro 850 855 860
- Ala Cys Phe Glu Ile Leu Leu Leu Ala Pro His Arg Gln Asn Trp Val 865 870 875 880
- Lys Lys Ile Arg Tyr Val Ile Phe Asp Glu Val His Cys Leu Gly Gly 885 890 895
- Glu Ile Gly Ala Glu Ile Trp Glu His Leu Leu Val Met Ile Arg Cys 900 905 910
- Pro Phe Leu Ala Leu Ser Ala Thr Ile Ser Asn Pro Glu His Leu Thr 915 920 925
- Glu Trp Leu Gln Ser Val Lys Trp Tyr Trp Lys Gln Glu Asp Lys Ile 930 935 940
- Ile Glu Asn Asn Thr Al a Ser Lys Arg His Val Gly Arg Gln Ala Gly 945 950 955 960
- Phe Pro Lys Asp Tyr Leu Gln Val Lys Gln Ser Tyr Lys Val Arg Leu 965 970 975

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- Val Leu Tyr Gly Glu Arg Tyr Asn Asp Leu Glu Lys His Val Cys Ser
- Ile Lys His Gly Asp Ile His Phe Asp His Phe His Pro Cys Ala Ala
- Leu Thr Thr Asp His I le Glu Arg Tyr Gly Phe Pro Pro Asp Leu
- Thr Leu Ser Pro Arg Glu Ser Ile Gln Leu Tyr Asp Ala Met Phe
- Gin Ile Trp Lys Ser Trp Pro Arg Ala Gin Giu Leu Cys Pro Giu
- Asn Phe Ile His Phe Asn Asn Lys Leu Val Ile Lys Lys Met Asp
- Ala Arg Lys Tyr Glu Glu Ser Leu Lys Ala Glu Leu Thr Ser Trp
- Ile Lys Asn Gly Asn Val Glu Gln Ala Arg Met Val Leu Gln Asn
- Leu Ser Pro Glu Ala Asp Leu Ser Pro Glu As n Met Ile Thr Met
- Phe Pro Leu Leu Val Glu Lys Leu Arg Lys Met Glu Lys Leu Pro
- Ala Leu Phe Phe Leu Phe Lys Leu Gly Ala Val Glu Asn Ala Ala
- Glu Ser Val Ser Thr Phe Leu Lys Lys Lys Gln Glu Thr Lys Arg
- Pro Pro Lys Ala Asp Lys Glu Ala His Val Met Ala Asn Lys Leu
- Arg Lys Val Lys Lys Ser Ile Glu Lys Gln Lys Ile Ile Asp Glu
- Lys Ser Gln Lys Lys Thr Arg Asn Val Asp Gln Ser Leu Ile His
- Glu Ala Glu His Asp Asn Leu Val Lys Cys Leu Glu Lys Asn Leu
- Glu Ile Pro Gln Asp Cys Thr Tyr Ala Asp Gln Lys Ala Val Asp

| Thr | G1u 1235 | Thr | Leu | Gln | L ys | Va1 1240 | Phe | G1y | Arg | Va 1 | Lys 1245 | Phe | Glu | Arg |
|-----|-------------|-----|-----|-----|------|-------------|-----|-----|-----|------|-------------|-------------|-----|-----|
| Lys | Gly 1250 | G1u | G1u | Leu | L ys | A1a 1255 | Leu | Ala | Glu | Ar g | Gly 1260 | IJе | G1y | Tyr |
| His | His 1265 | Ser | Ala | Met | Ser | Phe 1270 | Lys | G1u | Lys | G1 n | Leu 1275 | Val | Glu | Ile |
| Leu | Phe 1280 | Arg | Lys | G1y | T yr | Leu 1285 | Arg | Val | Val | Th r | Ala 1290 | Thr | G1y | Thr |
| Leu | A1a 1295 | Leu | G1y | Val | A sn | Met 1300 | Pro | Cys | Lys | Se r | Val 1305 | Val | Phe | Ala |
| G1n | Asn 1310 | Ser | Val | Tyr | L eu | Asp 1315 | Ala | Leu | Asn | Tyr | Arg 1320 | G1n | Met | Ser |
| G1y | Arg 1325 | Ala | Gly | Arg | A rg | Gly 1330 | Gln | Asp | Leu | Me t | Gly 1335 | Asp | Va1 | Tyr |
| Phe | Phe 1340 | Asp | Ile | Pro | P he | Pro 1345 | Lys | Ile | Gly | Ly s | Leu 1350 | Ile | Lys | Ser |
| Asn | Va1 1355 | Pro | G1u | Leu | A rg | Gly 1360 | His | Phe | Pro | Le u | Ser 1365 | Ile | Thr | Leu |
| Val | Leu 1370 | Arg | Leu | Met | L eu | Leu 1375 | Ala | Ser | Lys | G1 y | Asp 1380 | Asp | Pro | G1u |
| Asp | Thr 1385 | Lys | Ala | Lys | V a1 | Leu 1390 | Ser | Val | Leu | Ly s | His 1395 | Ser | Leu | Leu |
| Ser | Phe 1400 | Lys | G1n | Pro | Arg | Val 1405 | Met | Asp | Met | Le u | Lys 1410 | Leu | Tyr | Phe |
| Leu | Phe 1415 | Ser | Leu | GIn | P he | Leu 1420 | Val | Lys | Glu | G1 y | Tyr 1425 | Leu | Asp | Gln |
| G1u | Gly 1430 | Asn | Pro | Met | Gly | Phe 1435 | | Gly | Leu | Va 1 | Ser 1440 | His | Leu | His |
| Tyr | His 1445 | | Pro | Ser | A sn | Leu 1450 | Val | Phe | Val | Se r | Phe 1455 | Leu | Val | Asn |
| Gly | Leu 1460 | Phe | His | Asp | L eu | Cys 1465 | | Pro | Thr | Ar g | Lys 1470 | G1 <i>y</i> | Ser | Lys |
| His | Phe 1475 | | Gln | Asp | V a1 | Met 1480 | | Lys | Leu | Va 1 | Leu 1485 | | Leu | Ala |

His Leu Phe Gly Arg Arg Tyr Phe Pro Pro Lys Phe Gln Asp Ala His Phe Glu Phe Tyr Gln Ser Lys Val Phe Leu Asp Asp Leu Pro Glu Asp Phe Ser Asp Ala Leu Asp Glu Tyr Asn Met Lys Ile Met Glu Asp Phe Thr Thr Phe Leu Arg Ile Val Ser Lys Leu Ala Asp Met Asn Gln Glu Tyr Gln Leu Pro Leu Ser Lys Ile Lys Phe Thr Gly Lys Glu Cys Glu Asp Ser Gln Leu Val Ser His Leu Met Ser Cys Lys Glu Gly Arg Val Ala Ile Ser Pro Phe Val Cys Leu Ser Gly Asn Phe Asp Asp Asp Leu Leu Arg Leu Glu Thr Pro Asn His Val Thr Leu Gly Thr I le Gly Val Asn Arg Ser Gln Ala Pro Val Leu Leu Ser Gln Lys Phe Asp Asn Arg Gly Arg Lys Met Ser Leu Asn Ala Tyr Ala Leu Asp Phe Tyr Lys His Gly Ser Leu Ile Gly Leu Val Gln Asp Asn Arg Met Asn Glu Gly Asp Ala Tyr Tyr Leu Leu Lys Asp Phe Ala Leu Thr Ile Lys Ser Ile Ser Val Ser Leu Arg Glu Leu Cys Glu Asn Glu Asp Asp Asn Val Val Leu Ala Phe Glu Gln Leu Ser Thr Thr Phe Trp Glu Lys Leu Asn Lys Val